

In the Claims

Claims 1-31 (canceled).

Claim 32 (currently amended): A method of forming a particle-impregnated electrically conductive material over a semiconductor substrate, comprising:

providing the semiconductor substrate to comprise a substantially planar upper surface;

providing a mixture containing particles in a liquid carrier;

spreading the mixture over and directly against the substantially planar upper surface of the semiconductor substrate, and then evaporating the liquid carrier to leave the particles dispersed over and directly against said substantially planar upper surface the semiconductor substrate;

~~forming~~ utilizing atomic layer deposition to form a metal-containing monolayer of conductive material over and directly against the dispersed particles;

incorporating the metal of the monolayer into metal silicide or a metal nitride; the metal silicide or metal nitride being electrically conductive material directly against the particles; and

wherein the electrically conductive material and particles together are at least part of the particle-impregnated electrically conductive material.

Claim 33 (original): The method of claim 32 wherein the particles are electrically conductive.

Claims 34 and 35 (canceled).

Claim 36 (withdrawn): The method of claim 32 wherein the particles comprise carbon nanotubes.

Claim 37 (withdrawn): The method of claim 32 wherein the particles comprise photoluminescent or electroluminescent materials.

Claim 38 (canceled).

Claim 39 (original): The method of claim 32 wherein the particles comprise tungsten.

Claim 40 (original): The method of claim 39 wherein the monolayer comprises tungsten.

Claim 41 (currently amended): The method of claim 40 wherein the ~~particle-impregnated~~ electrically conductive material comprises tungsten silicide.

Claim 42 (original): The method of claim 39 wherein the monolayer comprises tantalum.

Claim 43 (currently amended): The method of claim 42 wherein the ~~particle-impregnated~~ electrically conductive material comprises tantalum nitride.

Claim 44 (original): The method of claim 32 wherein the particles have an average maximum dimension of from about 100Å to about 10,000Å.

Claim 45 (original): The method of claim 32 wherein the monolayer comprises tungsten.

Claim 46 (currently amended): The method of claim 32 wherein the monolayer comprises tungsten, and wherein the ~~particle-impregnated~~ electrically conductive material comprises tungsten silicide, ~~and further comprising exposing at least some of tungsten of the monolayer to silane to incorporate at least some of the tungsten into the tungsten silicide.~~

Claim 47 (original): The method of claim 46 wherein the monolayer is formed from WF_6 .

Claim 48 (original): The method of claim 32 wherein the monolayer comprises tantalum.

Claim 49 (withdrawn and currently amended): The method of claim 32 wherein the monolayer comprises tantalum, and wherein the ~~particle-impregnated~~ electrically conductive material comprises tantalum nitride, ~~and further comprising exposing at least some of the tantalum of the monolayer to NH₃ to incorporate at least some of the tantalum into the tantalum nitride.~~

Claim 50 (withdrawn): The method of claim 49 wherein the monolayer is formed from TaF₅.

Claims 51-60 (canceled).